



STATE OF DELAWARE
EXECUTIVE DEPARTMENT
OFFICE OF
STATE PLANNING COORDINATION

March 15, 2005

Ms. Rebecca Michaels
McCrone, Inc.
119 Naylor Mill Road, Ste 6
Salisbury, MD 21801

RE: PLUS review – PLUS 2005-02-06; Stonewater Creek – Phase 10-13

Dear Ms. Michaels:

Thank you for meeting with State agency planners on February 23, 2005 to discuss the proposed plans for phases 10-13 of the Stonewater Creek project to be located approximately 2000' west of the intersection of Cannon Road with DE Rt. 5 and 23.

According to the information received, you are seeking site plan review for 400 residential units on 200 acres.

Please note that changes to the plan, other than those suggested in this letter, could result in additional comments from the State. Additionally, these comments reflect only issues that are the responsibility of the agencies represented at the meeting. The developers will also need to comply with any Federal, State and local regulations regarding this property. We also note that as Sussex County is the governing authority over this land, the developers will need to comply with any and all regulations/restrictions set forth by the County.

Executive Summary

The following section includes some site specific highlights from the agency comments found in this letter. This summary is provided for your convenience and reference. The full text of this letter represents the official state response to this project. ***Our office notes that the applicants are responsible for reading and responding to this letter and all comments contained within it in their entirety.***

State Strategies/Project Location

- This proposal is located within an Investment Level 4 area according to the Strategies for State Policies and Spending and a Low Density area according to the Sussex County Comprehensive Plan. In these areas, State policies encourage preservation of agricultural and natural resources and not development. Because of its location within an Investment Level 4 area, we object to the proposal and notes that the State will not participate in any infrastructure upgrades or other improvements necessary to support this development.

Street Design and Transportation

- The Department of Transportation has submitted comments to the County regarding the traffic impact study. All recommendations from DelDOT should be required.
- The developer of Stonewater Creek should be required to provide rights-of-way from the land that they own for the future realignment of the substandard curve on Townsend Road at the west edge of the property.
- Where possible, the cul-de-sacs should be eliminated.

Natural and Cultural Resources

- Once the boundary of the cemetery is determined, the area should be protected as dedicated open space to avoid problems with the Unmarked Human Remains Act later. This buffer should be large enough to protect the other archaeological remains associated with this farmstead.
- Open space proposed on the southern portion of this property could be relocated along the forested area in the northern portion to help mitigate any impacts to the forests, wetlands, and Phillips Branch from construction activities or impacts from homeowner activities.
- The applicant should preserve the existing natural forested buffer adjacent to said wetlands in their entirety. Efforts to maximize or expand (beyond the recommended 100-foot minimum) the existing natural buffer width with native herbaceous and/or woody vegetation, is strongly recommended.
- All stormwater management pond(s) should be at least 100 feet away from all wetlands and/or streams.
- The site plan should be modified to protect the excellent recharge area.

The following are a complete list of comments received by State agencies:

Office of State Planning Coordination – Contact: Ann Marie Townshend 739-3090

This proposal is located within an Investment Level 4 area according to the Strategies for State Policies and Spending and a Low Density area according to the Sussex County Comprehensive Plan. In these areas, State policies encourage preservation of agricultural and natural resources and not development. Because of its location within an Investment Level 4 area, we object to the proposal and notes that the State will not participate in any infrastructure upgrades or other improvements necessary to support this development.

We are particularly concerned with the cumulative impact of this along with the other approved and pending development proposals in this immediate area. Neighboring proposals include the previous phases of Stonewater Creek, Double Eagle Farms, Indigo Run, Avebury and Whetherby. Cumulatively, these projects will account for a significant amount of residential development outside of areas where State and local governments have planned for growth. At a minimum, we encourage the relevant developers to work together to address some of the cumulative impacts, by providing interconnected streets, open space, and bicycle and pedestrian facilities.

We recommend that the developer look for opportunities to reduce the number of cul-de-sacs used in the proposed development to provide for a more interconnected road system.

State Historic Preservation Office (SHPO) – Contact: Alice Guerrant 739-5685

There are two known late-19th – early 20th c. historic farm complexes within the parcel, one of which includes a cemetery. There is a low to medium probability of prehistoric period archaeological sites here. The SHPO understands that the developer has already contracted with Heite Consulting, Inc., to delineate the cemetery. Once this is done, the area with a buffer needs to be dedicated open space to avoid problems with the Unmarked Human Remains Act later. They would like the area to be large enough to protect the other archaeological remains associated with this farmstead.

The SHPO would appreciate the opportunity to look for prehistoric sites before any construction begins, and perhaps allow any such site to be included in the open space.

Department of Transportation – Contact: Bill Brockenbrough 760-2109

Because the development is proposed for a Level 4 Area, it is inconsistent with the Strategies for State Policies and Spending. Therefore DelDOT will not participate in the cost of any road improvements needed to support this development. The comments that follow are technical, and are not intended to suggest that DelDOT supports this development proposal.

- 1) This development, known to us the Prettyman Property, was the subject of a traffic impact study (TIS) that was prepared by the developer's traffic engineer. On January 18, 2005, DelDOT sent comments to Sussex County based on a

review of that study. While their comments to the County were more detailed, there were five key recommendations:

- a) Townsend Road within the limits of the proposed development should be improved to eliminate sub-standard curves and to improve the roadway surface and width. The roadway should be improved to include a minimum of two eleven-foot wide lanes and five-foot wide shoulders. Geometric design criteria (such as minimum curve radii) should be based on a 50 mph design speed.
 - b) The developer should provide full, unsignalized access at one location on Townsend Road (stop-control on site driveways). Separate right-turn lanes should be provided in each direction on Townsend Road. Five-foot shoulders should be maintained through the right-turn lanes.
 - c) Beyond the required cross section required for roadway and drainage needs, the developer should set aside an additional fifteen foot buffer on both sides of Townsend Road (either through right-of-way donation or permanent easement) for potential future sidewalk facilities.
 - d) The developer should enter into an agreement with DelDOT, whereby the developer would fund the entire cost of a traffic signal at the intersection of Route 5 at Route 23 (Beaver Dam Road). The costs shall include pedestrian signals and crosswalks at DelDOT's discretion and all costs associated with the interconnection of this signal with other signals in the area.
 - e) The developer should enter into an agreement with DelDOT, whereby the developer would fund the entire cost of a traffic signal at the intersection of Route 5 at Harmons Hill Road/Phillips Branch Road. The costs shall include pedestrian signals and crosswalks at DelDOT's discretion and all costs associated with the interconnection of this signal with other signals in the area.
- 2) The plan presented seems consistent with the recommendations listed in b) above but DelDOT would add that there is a substandard curve on Townsend Road at the west edge of the property. The realignment of this curve will require rights-of-way from both the subject development and a proposed development immediately west of it, known to DelDOT as Double Eagle Farms. DelDOT has not heard from the developer of Double Eagle Farms since that project was reviewed at the May 27, 2004, PLUS meeting. However, the developer of Stonewater Creek should be required to provide rights-of-way from the land that they own for the future realignment of this curve.

- 3) DelDOT recommends that the County require that stub streets be provided for future connections to the Double Eagle Farms development (mentioned above) both north and south of Townsend Road.
- 4) DelDOT supports the comment from the State Planning office that some of the proposed cul-de-sacs should be eliminated. They understand that cul-de-sacs are necessary in some instances to make efficient use of the land. However, they are not conducive to good traffic flow or a sense of community. Where possible they should be eliminated.
- 5) DelDOT supports the recommendations from Mr. Robert Ehemann on how the plan might be improved to provide better pedestrian access.
- 6) The developer's site engineer should contact the DelDOT Subdivision Manager for Sussex County, Mr. John Fiori, regarding their requirements for vehicular access. Mr. Fiori may be reached at (302) 760-2260.

The Department of Natural Resources and Environmental Control – Contact: Kevin Coyle 739-3091

Design Recommendation

Forested areas on site should be preserved. Lots that encroach on this forest should be removed in their entirety. Open space proposed on the southern portion of this property could be relocated along the forested area in the northern portion to help mitigate any impacts to the forests, wetlands, and Phillips Branch from construction activities or impacts from homeowner activities.

Soils

According to the soil survey update Fort Mott-Henlopen complex, Downer, Rosedale, Ingleside, Pepperbox, and Longmarsh-Indiantown complex were mapped in the immediate vicinity of the proposed construction. Fort Mott-Henlopen complex, Downer, Rosedale, and Ingleside are well-drained upland soils that have few limitations for development. Pepperbox is a moderately well-drained soil of low-lying uplands that has moderate limitations for development. Longmarsh-Indiantown complex is a very poorly-drained wetland associated (hydric) soil that has severe limitations for development.

Wetlands

Statewide Wetland Mapping Project (SWMP) maps indicate the presence of palustrine wetlands on this site along Phillips Branch. From the site plans provided, it appears that there will be no impact to wetlands. If wetland disturbances are deemed necessary please note that impacts to wetlands are regulated by the Army Corps of Engineers through Section 404 of the Clean Water Act; impacts to tidal wetlands are also regulated by the

DNREC Division of Water Resources, Wetlands and Subaqueous Lands Section. In addition, individual 404 permits and certain Nationwide Permits from the Army Corps of Engineers also require 401 Water Quality Certification from the Wetlands and Subaqueous Lands Section and Coastal Zone Federal Consistency Certification from the DNREC Division of Soil and Water Conservation, Delaware Coastal Programs Section. Each of these certifications represents a separate permitting process.

To find out more about permitting requirements, the applicant is encouraged to attend a Joint Permit Process Meeting. These meetings are held monthly and are attended by federal and state resource agencies responsible for wetland permitting. Contact Denise Rawding at (302) 739-4691 to schedule a meeting.

It should also be noted that headwater riparian wetlands immediately border the northern boundary of said parcel. Headwater streams are important for the protection of water quality and the maintenance/integrity of the ecological functions throughout the length of the stream, including the floodplain system and/or waterbodies downstream. **In recognition of this concern, the Department strongly recommends that the applicant preserve the existing natural forested buffer adjacent to said wetlands in their entirety. Efforts to maximize or expand (beyond the recommended 100-foot minimum) the existing natural buffer width with native herbaceous and/or woody vegetation, are strongly recommended.**

If the project involves any work in a stream it may need a State of Delaware Subaqueous Lands Permit. Contact the Wetlands and Subaqueous Lands Section at (302) 739-4691.

It is also strongly recommended that all Stormwater management pond(s) be at least 100 feet away from all wetlands and/or streams.

ERES Waters

This project is located adjacent to receiving waters of Inland Bays designated as waters having Exceptional Recreational or Ecological Significance (ERES). ERES waters are recognized as special assets of the State, and shall be protected and/or restored, to the maximum extent practicable, to their natural condition. Provisions in Section 11.5 of Delaware's "Surface Water Quality Standards" (as amended August 11, 1999), specify that all designated ERES waters and receiving tributaries develop a "pollution control strategy" to reduce non-point sources of nutrient runoff through implementation of Best Management Practices (BMPs). Best Management Practices as defined in subsection 11.5(e) of this section, expressly authorizes the Department to provide standards for controlling the addition of pollutants and reducing them to the greatest degree practicable, or where attainable, a standard requiring no discharge of pollutants.

TMDLs

With the adoption of Total Maximum Daily Loads (TMDLs) as a “nutrient-runoff-mitigation strategy” for reducing nutrients in the Inland Bays Watershed, reduction of nitrogen and phosphorus loading will be mandatory. A TMDL is the maximum level of pollution allowed for a given pollutant below which a “water quality limited water body” can assimilate and still meet water quality standards to the extent necessary to support use goals such as, swimming, fishing, drinking water and shell fish harvesting. Although TMDLs are authorized under federal code, states are charged with developing and implementing standards to support those desired use goals. The Jurisdictional authority for attaining these use goals will fall under the auspices of Section 11.5 of the State of Delaware’s Surface Water Quality Standards (as amended August 11, 1999), and will be achieved via nutrient reductions referred to as “pollution control strategies.”

Nutrient reductions prescribed under TMDLs are assigned on basis of water quality concerns – that is, the those regions deemed to be of greatest environmental concern will require correspondingly higher levels of nutrient reduction than those regions deemed less environmentally sensitive. In this watershed, these regions are demarcated as high and low reduction zones. The high reduction zone corresponds to the western portion of the watershed, and requires a reduction of nitrogen and phosphorus by 85 and 65 percent, respectively. The low reduction zone corresponds to the eastern portion of the watershed, and requires a reduction of nitrogen and phosphorus by 40 percent. **This project is proposed within the low nutrient reduction zone.**

In order for the applicant to verify compliance with the TMDL mandate, a full nutrient accounting process known as nutrient budget should be prepared. The developer/consultant should contact Lyle Jones in the Department’s Watershed Assessment Section for further information regarding the acceptable protocol for calculating a nutrient budget. He can be reached as 739-4590.

Water Supply

The project information sheets state that the source of water supply has not yet been determined. Records indicate that the project is not located in an area where public water service is available. The Division of Water Resources will consider applications for the construction of on-site wells provided the wells can be constructed and located in compliance with all requirements of the Regulations Governing the Construction and Use of Wells. In this case, a minimum isolation distance of 150 ft. is required between the well and any potential source of contamination, such as a septic tank and sewage disposal area. A well construction permit must be obtained prior to constructing any wells.

Should dewatering points be needed during any phase of construction, a dewatering well construction permit must be obtained from the Water Supply Section prior to construction of the well points. In addition, a water allocation permit will be needed if the pumping rate will exceed 50,000 gallons per day at any time during operation.

All well permit applications must be prepared and signed by licensed water well contractors, and only licensed well drillers may construct the wells. Please factor in the necessary time for processing the well permit applications into the construction schedule. Dewatering well permit applications typically take approximately four weeks to process, which allows the necessary time for technical review and advertising.

Should you have any questions concerning these comments, please contact Rick Rios at 302-739-3665.

Water Resource Protection Areas

A portion of the parcel is located in an excellent recharge area (see map). According to the State law that created the Source Water Protection Program, county and municipal governments will be required to enact ordinances to protect Water Resource Protection Areas. The following language has been excerpted from the Source Water Protection Guidance Manual for Local Governments, Supplement 1 - Ground-Water Recharge Design Methodology. While the local ordinances are not yet in place, the developer may find the language useful in modifying the site plan to protect the excellent recharge area.

Water Resource Protection Areas (WRPAs) are defined as (1) surface water areas such as floodplains, limestone aquifers, and reservoir watersheds, (2) wellhead areas, or (3) excellent recharge areas. The purpose of an impervious cover threshold is to minimize loss of recharge and protect the quality and quantity of ground and surface water supplies in WRPAs.

New development in WRPAs may exceed the 20 % impervious cover threshold, but be no more than 50 % impervious, provided the applicant submits an environmental assessment report recommending a climatic water budget and facilities to augment recharge. The environmental assessment must document that post-development recharge will be no less than predevelopment recharge when computed on an annual basis.

Commonly, the applicant offsets the loss of recharge due to impervious cover by constructing recharge basins that convey relatively pure rooftop runoff for infiltration to ground water.

The Department recommends the following (ranked in order of preference):

- 1) Preserve WRPAs as open space and parks by acquisition or conservation easement.

- 2) Limit impervious cover of new development to 20 % by right within WRPA's.
- 3) Allow impervious cover of new development to exceed 20% within WRPA's (but no more than 50% impervious) provided the applicant develops recharge facilities that directly infiltrate rooftop runoff.
- 4) Allow impervious cover of new development to exceed 20% within WRPA's (but no more than 50% impervious) provided the applicant develops recharge facilities that infiltrate stormwater runoff from forested and/or grassed surfaces with pretreatment.

For more information refer to the draft Source Water Protection Guidance Manual for the Local Governments of Delaware

<http://www.wr.udel.edu/swaphome/phase2/Manual/SwappManual.pdf> and Ground-

Water Recharge Design Methodology

http://www.wr.udel.edu/swaphome/phase2/Manual/SwappManual_supplement_1.pdf.

In addition, activities that include the storage or disposal of hazardous substances may be prohibited or otherwise regulated by other state regulations. For more information on activities that are regulated please refer to

http://www.wr.udel.edu/swaphome/phase2/Publications/Existing%20Authorities%202002_02.pdf.

Sediment and Erosion Control/Stormwater Management

1. During the design of the sediment control and stormwater management plan, considerations should be made for maintenance (i.e. access, easements, etc.) of any structures or facilities.
2. During the design of the stormwater management facility please note that both stormwater quantity and quality must be addressed.
3. All ponds are required to be constructed per pond code 378.
4. Please note that if the stormwater facilities will impact wetlands, a permit must be provided to the District prior to receiving approval.
5. Due to the proximity to sensitive areas, the Conservation District will require reinforced and super silt fence to adequately protect wetland areas during the construction of the site

6. A CCR is required for this development since the gross acreage for the project exceeds 50 acres.

Forests

According to the application, over 50% of the forest on this parcel is to be removed. The site plan should be designed in a way that allows for preservation of as much of this wooded area as feasible. This parcel may present a unique opportunity for passive open space along the forested area. It is suggested that the current lots shown in this area be removed and open space be designated along this the forest. Removal of lots and designation of buffers of 100 feet along the wooded area will help improve habitat for wildlife and water quality.

Forested areas on-site set aside for conservation purposes should be placed into a permanent conservation easement or other binding protection. These areas should be clearly marked and delineated so that residents understand their importance and so that homeowner activities do not infringe upon these areas.

Open Space

To maximize the existing buffering capacity and wildlife habitat on site, it is recommended that lot lines and other infrastructure (such as storm water management ponds) be pulled out of the forest and that areas of community open space be designated along the forested/riparian areas. Doing so will accomplish two things: it will preserve and expand the existing buffers on site and its value for birds and wildlife and it will create recreational opportunities for residents by allowing them access to and views of the forest and Phillips Branch.

Open space containing forest and/or wetlands should be placed into a permanent conservation easement or other permanent protection mechanism. Conservation areas should also be demarked to avoid infringement by homeowners.

Rare/Threatened/Endangered Species

Delaware Natural Heritage and Endangered Species Program staff have never surveyed this parcel, so their database indicates that there are currently no records of state-rare or federally listed plants, animals or natural communities on the project parcel. However, there is a rare "sea level fen" community downstream adjacent to Phillips Branch that could be detrimentally affected by changes to water quality. Increased sediment levels and nutrient inputs could alter pH, and the species in this community could disappear as they rely on a specific hydrology.

Nuisance Waterfowl

The proposed stormwater ponds will likely attract waterfowl like resident Canada geese and mute swans that will create a nuisance for community residents. High concentrations of waterfowl in ponds create water-quality problems, leave droppings on lawn and paved areas and can become aggressive during the nesting season. Ponds that remain in the subdivision plan should be landscaped to deter nuisance species. Short manicured lawns around ponds provide an attractive habitat for these species. However, native plantings, including tall grasses, wildflowers, shrubs, and trees at the edge and within a buffer area (at least 50 feet) around ponds, are not as attractive to geese because they do not feel as safe from predators and other disturbance when their view of the area is blocked. The Division of Fish and Wildlife does not provide goose control services, and if problems arise, residents or the home-owners association will have to accept the burden of dealing with these species (e.g., permit applications, costs, securing services of certified wildlife professionals). Solutions can be costly and labor intensive; however, with a reduction in the number of ponds, proper landscaping, monitoring, and other techniques, geese problems can be minimized.

Recreation

It is recommended that sidewalks be built fronting every residence and stub streets. A complete system of sidewalks will: 1) fulfill the recreation need for walking and biking facilities, 2) provide opportunities for neighbors to interact in the community, and 3) facilitate safe, convenient off-road access to neighboring communities, parks, public mass transit stops, schools, stores, work, etc.

The Division of Parks and Recreation conducted a telephone survey of Delaware residents to gather information on outdoor recreation patterns and preferences as well as other information on their landscape perception. These findings are the foundation of the 2003-2008 Statewide Comprehensive Outdoor Recreation Plan (SCORP) providing guidance for investments in needed outdoor recreation facilities. The high facility needs in Eastern Sussex County are Walking and Jogging, Bike Paths and Fishing Areas. The moderate facility needs are Picnic Areas, Skate Facilities, Canoe/Kayak Access, Hiking Trails, Swimming Pools, Playgrounds, Soccer Fields, Tennis Courts, Power Boat Access and Baseball/Softball Fields. Consideration should be given to incorporate some of these recreation opportunities into the project. For additional information about the outdoor recreation priorities, contact Bob Ehemann at 739-5285.

Air Quality

Once complete, vehicle emissions associated with this project are estimated to be 30.7 tons (61,395.8 pounds) per year of VOC (volatile organic compounds), 25.4 tons (50,831.6 pounds) per year of NO_x (nitrogen oxides), 18.8 tons (37,504.5 pounds) per year of SO₂ (sulfur dioxide), 1.7 ton (3,338.5 pounds) per year of fine particulates and 2,567.8 tons (5,135,682.6 pounds) per year of CO₂ (carbon dioxide).

Emissions from area sources associated with this project are estimated to be 12.4 tons (24,763.7 pounds) per year of VOC (volatile organic compounds), 1.4 ton (2,724.8 pounds) per year of NOx (nitrogen oxides), 1.1 ton (2,261.2 pounds) per year of SO2 (sulfur dioxide), 1.5 ton (2,917.9 pounds) per year of fine particulates and 50.2 tons (100,386.6 pounds) per year of CO2 (carbon dioxide).

Emissions from electrical power generation associated with this project are estimated to be 4.9 tons (9,814.6 pounds) per year of NOx (nitrogen oxides), 17.1 tons (34,137.6 pounds) per year of SO2 (sulfur dioxide) and 2,517.6 tons (5,035,296.0 pounds) per year of CO2 (carbon dioxide).

	VOC	NOx	SO ₂	PM _{2.5}	CO ₂
Mobile	30.7	25.4	18.8	1.7	2567.8
Residential	12.4	1.4	1.1	1.5	50.2
Electrical Power		4.9	17.1		2517.6
TOTAL	43.1	31.7	37.0	3.2	5135.6

For this project the electrical usage via electric power plant generation alone totaled to produce an additional 4.9 tons of nitrogen oxides per year and 17.1 tons of sulfur dioxide per year.

A significant method to mitigate this impact would be to require the builder to construct Energy Star qualified homes. Every percentage of increased energy efficiency translates into a percent reduction in pollution. Quoting from their webpage

<http://www.energystar.gov/>:

“ENERGY STAR qualified homes are independently verified to be at least 30% more energy efficient than homes built to the 1993 national Model Energy Code or 15% more efficient than state energy code, whichever is more rigorous. These savings are based on heating, cooling, and hot water energy use and are typically achieved through a combination of:

- building envelope upgrades,
- high performance windows,
- controlled air infiltration,
- upgraded heating and air conditioning systems,
- tight duct systems and
- upgraded water-heating equipment.”

Our energy office in DNREC is in the process of training builders in making their structures more energy efficient. The Energy Star Program is excellent way to save on energy costs and reduce air pollution. We highly recommend this project development and other residential proposals increase the energy efficiency of their homes.

State Fire Marshal's Office – Contact: Duane Fox 856-5298

These comments are intended for informational use only and do not constitute any type of approval from the Delaware State Fire Marshal's Office. At the time of formal submittal, the applicant shall provide; completed application, fee, and three sets of plans depicting the following in accordance with the Delaware State Fire Prevention Regulation (DSFPR):

a. **Fire Protection Water Requirements:**

- Water distribution system capable of delivering at least 1500 gpm for 2-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Storage)
- Water distribution system capable of delivering at least 1000 gpm for 1-hour duration, at 20-psi residual pressure is required. Fire hydrants with 800 feet spacing on centers. (Assembly)
- Where a water distribution system is proposed for single family dwellings it shall be capable of delivering at least 500 gpm for 1-hour duration, at 20-psi residual pressure. Fire hydrants with 1000 feet spacing on centers are required. (One & Two- Family Dwelling)
- Where a water distribution system is proposed for the site, the infrastructure for fire protection water shall be provided, including the size of water mains for fire hydrants and sprinkler systems.

b. **Fire Protection Features:**

- All structures over 10,000 Sq. Ft. aggregate will require automatic sprinkler protection installed.
- Buildings greater than 10,000 sq.ft., 3-stories or more or over 35 feet, or classified as High Hazard, are required to meet fire lane marking requirements.
- Show Fire Department Connection location (Must be within 300 feet of fire hydrant), and detail as shown in the DSFPR.
- Show Fire Lanes and Sign Detail as shown in DSFPR

c. **Accessibility**

- All premises which the fire department may be called upon to protect in case of fire, and which are not readily accessible from public roads, shall be provided with suitable gates and access roads, and fire lanes so that all buildings on the premises are accessible to fire apparatus. This means that the access road to the subdivision from Townsend Road must be constructed so fire department apparatus may negotiate it.
- Fire department access shall be provided in such a manner so that fire apparatus will be able to locate within 100 ft. of the front door.
- Any dead end road more than 300 feet in length shall be provided with a turn-around or cul-de-sac arranged such that fire apparatus will be able to turn around by making not more than one backing maneuver. The

minimum paved radius of the cul-de-sac shall be 38 feet. The dimensions of the cul-de-sac or turn-around shall be shown on the final plans. Also, please be advised that parking is prohibited in the cul-de-sac or turn around.

- The use of speed bumps or other methods of traffic speed reduction must be in accordance with Department of Transportation requirements.
- The local Fire Chief, prior to any submission to our Agency, shall approve in writing the use of gates that limit fire department access into and out of the development or property.

d. **Gas Piping and System Information:**

- Provide type of fuel proposed, and show locations of bulk containers on plan.

e. **Required Notes:**

- Provide a note on the final plans submitted for review to read “ All fire lanes, fire hydrants, and fire department connections shall be marked in accordance with the Delaware State Fire Prevention Regulations”
- Proposed Use
- Alpha or Numerical Labels for each building/unit for sites with multiple buildings/units
- Square footage of each structure (Total of all Floors)
- National Fire Protection Association (NFPA) Construction Type
- Maximum Height of Buildings (including number of stories)
- Note indicating if building is to be sprinklered
- Name of Water Provider
- Letter from Water Provider approving the system layout
- Provide Lock Box Note (as detailed in DSFPR) if Building is to be sprinklered
- Provide Road Names, even for County Roads

Preliminary meetings with fire protection specialists are encouraged prior to formal submittal. Please call for appointment. Applications and brochures can be downloaded from our website: www.delawarestatefiremarshal.com, technical services link, plan review, applications or brochures.

Department of Agriculture - Contact: Mark Davis 739-4811

Delaware Department of Agriculture and the Delaware Forest Service do not support the development of this parcel within an Investment Level 4 area. This development as proposed will lessen the value of the environmental resources found within and adjacent to this site. The site falls within a high valued area of connectivity for state open space and land preservation activities. This site is located in both a high priority areas for both agricultural and forestland preservation on the state's Green Infrastructure Preservation Map. The Department strongly encourages the developer to work with all agencies to

address such concerns as preservation of forested areas, preservation of agricultural activities and a reduction to the overall impact to areas service such as schools and EMS. The Delaware Department of Agriculture Forest Service offers it services to the developer in the re-design of this project, to learn more please contact our office at (302) 698-4500.

Right Tree for the Right Place

The Delaware Department of Agriculture Forest Service encourages the developer to use the “Right Tree for the Right Place” for any design considerations. This concept allows for the proper placement of trees to increase property values in upwards of 25% of appraised value and will reduce heating and cooling costs on average by 20 to 35 dollars per month. In addition, a landscape design that encompasses this approach will avoid future maintenance cost to the property owner and ensure a lasting forest resource.

Native Landscapes

The Department of Agriculture encourages the developer to use native trees and shrubs to buffer the property from the adjacent land-use activities near this site. A properly designed forested buffer can create wildlife habitat corridors and improve air quality to the area by removing six to eight tons of carbon dioxide annually and clean our rivers and creeks of storm-water run-off pollutants. To learn more about acceptable native trees and how to avoid plants considered invasive to our local landscapes, please contact the Delaware Department of Agriculture Plant Industry Section at (302) 698-4500.

Berm Design and Construction

The Delaware Department of Agriculture Forest Service encourages the developer to design a landscape feature above the current county code that reflects the local topography and utilizes native trees and shrubs. A well designed berm can create an attractive feature that is welcoming to the community and will beneficial to both desired economic and environmental issues.

Open Space Considerations

The Delaware Department of Agriculture and the Delaware Forest Service supports comments made by DNREC to allow for improved design to open space and provide areas of connectivity to both passive and open space areas within the planned community.

Forest Buffers

This site does have elements of riparian corridors and forest buffers along the northern and eastern edges of the property. The Delaware Department of Agriculture and the Delaware Forest Service encourages the developer to implement tree preservation practices and supports the Sussex Conservation District in their efforts to preserve trees

on this site. Both agencies agree that trees should not be removed for construction of storm water management facilities. The Forest Service encourages the developer to seek the assistance of a certified arborist or certified forest to aid in this design process.

Public Service Commission - Contact: Andrea Maucher 739-4247

This project is not in a certificated area for water service. If water services are requested from a private utility, that utility will need to apply for a Certificate of Public Convenience and Necessity.

Any expansion of natural gas or installation of a closed propane system must fall within Pipeline Safety guidelines. Contact: Malak Michael at (302) 739-4247.

If wastewater services are requested from a non-governmental entity, and there would be 50 or more customer served, the provider will need to apply to the Commission for a Certificate of Public Convenience and Necessity (CPCN). Additional requirements may apply if the provider has not previously been awarded a CPCN by the Commission.

Delaware State Housing Authority – Contact Karen Horton 739-4263

According to the State Strategies Map, the proposal is located in Investment Level 4 and outside the growth zone. As a general practice, DSHA encourages residential development in areas where residents will have proximity to services, markets, and employment opportunities such as Investment Level 1 and 2 areas outlined in the State Strategies Map. The proposal is located in an area targeted for agricultural activities and natural resource protection, and therefore inconsistent with where the State would like to see new residential development.

Delaware Emergency Management Agency – Contact: Don Knox 659-3362

Due to the large number of residential units being proposed, a significant impact to public safety is foreseen by implementation of this project. The developer should notify the police, fire service, and emergency medical response organization serving this portion of Sussex County, to keep them apprised of all development activities. Routes 5 and 24 are coastal storm evacuation routes and this development will be affected by traffic volume on these routes during a coastal storm event.

Sussex County – Contact: Richard Kautz 855-7878

Because this project is an AR-1 Cluster subdivision, the developer must include in the application a plan for the management of all open space. Also, the developer must document for the Planning and Zoning Commission how the proposed development: provides for a total environment and design which are superior to that which would be allowed under the standard lot option; preserves the natural environment and historic or archeological resources; and, will not have an adverse effect on any of the items included

under Ordinance Number 1152 (County Code 99-9C). These issues can be addressed by including in the application an explanation of how the developer plans to mitigate the issues raised by the State agencies.

This summer Sussex County will be considering implementation of a Source Water Protection Program required by the State. Depending on the requirements adopted by the County Council this project might be affected. Any well location should insure that the wellhead protection area is entirely on site. Also, the location of the water and wastewater treatment facilities should be relocated so as to not impact contiguous property.

The Sussex County Engineer Comments:

The project proposes to develop using a private central community wastewater system. It is recommended that the wastewater system be operated under a long-term contract with a capable wastewater utility that meets TMDL limits for Delaware's Inland Bays. In addition, The Sussex County Engineering Department recommends they have a wastewater utility provider prior to approving the project. The proposed project is located outside of the Inland Bays Planning Area where Sussex County expects to provide sewer service. Sussex County requires design and construction of the collection and transmission system to meet Sussex County sewer standards and specifications. A review and approval of the treatment and disposal system by the Sussex County Engineering Department is also required. Disposal fields should not be counted as open space. Wastewater disposal fields should be clearly identified on the Record Plan.

Plans for these phases have not been approved and treatment plant capacity must be addressed. Please see the attached letter dated September 30, 2004 from Mr. Michael A. Izzo, P. E., Sussex County Engineer to Mr. Brian Pinkerton.

If Sussex County ever provides sewer service, it is required that the treatment system be abandoned and a direct connection made to the County system at the developers and/or homeowners association expense.

Sussex County has recently acquired more than two thousand acres of adjacent and nearby land for future wastewater spray irrigation and other wastewater treatment systems and uses associated with industrial sites. Each future deed for parcels in the proposed development should note that the development adjoins future wastewater treatment facilities and that industrial type uses on those lands should be anticipated.

For questions regarding these comments, contact Rob Davis, Sussex County Engineering Department at (302) 855-7820.

Following receipt of this letter and upon filing of an application with the local jurisdiction, the applicant shall provide to the local jurisdiction and the Office of State Planning Coordination a written response to comments received as a result of

PLUS 2005-02-06

March 15, 2005

Page 18 of 18

the pre-application process, noting whether comments were incorporated into the project design or not and the reason therefore.

Thank you for the opportunity to review this project. If you have any questions, please contact me at 302-739-3090.

Sincerely,

A handwritten signature in dark ink, reading "Constance C. Holland". The signature is fluid and cursive, with the first name "Constance" being more prominent than the last name "Holland".

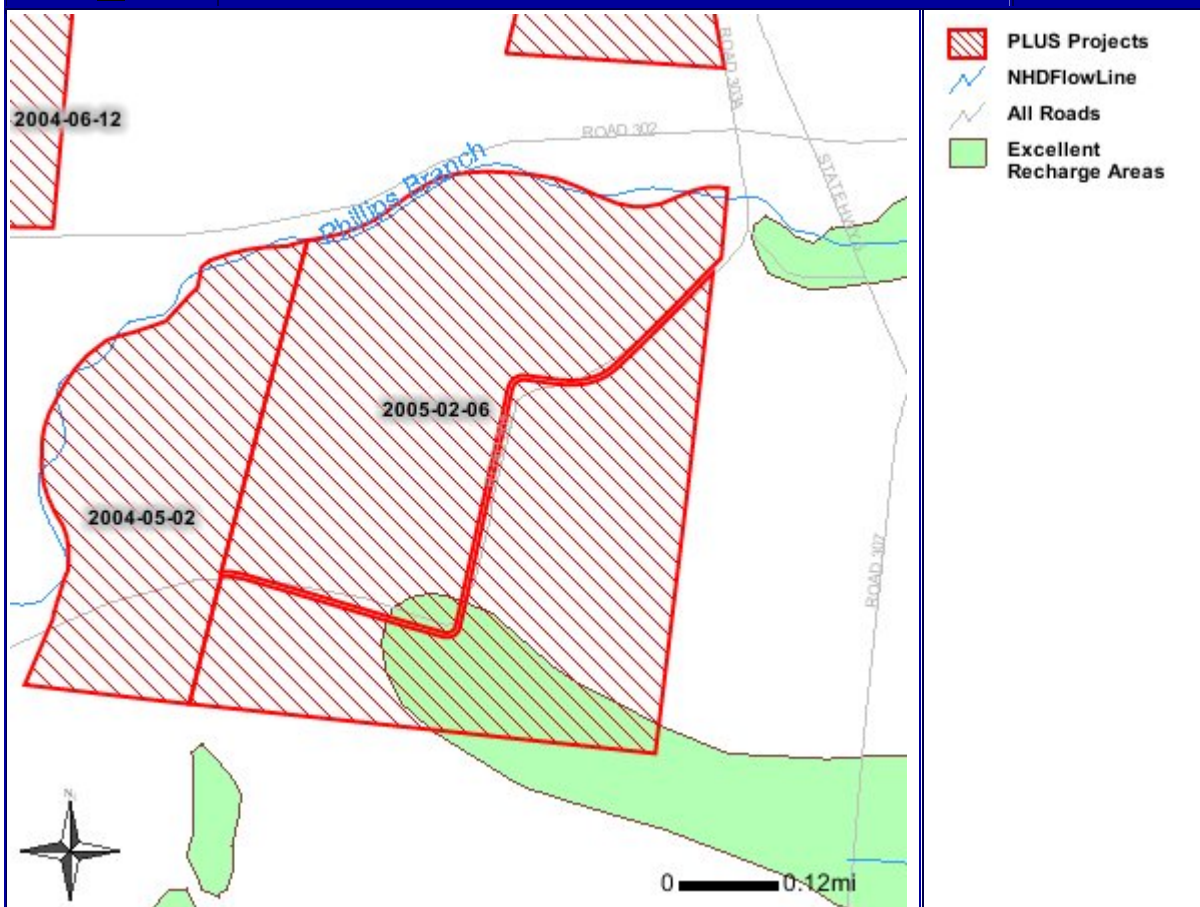
Constance C. Holland, AICP
Director

CC: Ivy Branch Associates, LLC
Sussex County



Stonewater Creek

2005-02-06



This map was produced by the Delaware Department of Natural Resources and Environmental Control.

